About 24 years ago, an accomplished implantologist, Dr Victor Sendax of America, decided to question the protocol and rationale in placing large diameter implants. He developed the small diameter implants with a straightforward protocol, which, in most instances require no surgery, and with an initial entry point with only a pilot drill, he proposed a self-tapping (screw-ing) procedure, which not only delivered the implant into the bone but also firmly secured it into its place. It was minimally invasive, incredibly less traumatic, and painless. It allowed the operator to stabilize dentures and securely fix crowns and bridges. Today, it is widely used worldwide and will, in my view, replace conventional implants. There are very few instances indeed and mini-implants, once it is understood, will become standard practice. In fact, there is an exponential growth of mini-implants in America and worldwide, because of simplicity, extremely high success rate, and above all patients talk about the straightforward procedures and good aesthetic results.

Mini-implants growth is phenomenal and will be a procedure, which every dentist of the present and future generation will need to know. Its growth will be driven by patients’ demand.

How do mini-implants osteointegrate and what is your experience on their long-term stability?

The probability of osteointegrating of mini-implant is much greater, as it does not utilize osteotomy (in simple terms, cutting out large chunks of bone in order to introduce the conventional implants). Without the trauma of this procedure, which may generate excessive heat, may ultimately result in bone necrosis & failure of the conventional implants, mini-implants utilize a self-tapping procedure, which allow, intimate and firm contact of mini-implant to bone, once it is introduced.

With the specific design like a typical screw and surface coating osseointegration takes place, I must caution not all mini-implants and conventional implants are the same. They are not generic products, and you must choose your mini-implant carefully, i.e., the company that produces it.

I utilize Mini Drive-Lock, (MDL,) coming from the United States of America. It has really good properties which allow easy placement and long-term stability, especially for crowns and bridges. The Food and Drug Administration from America, which is very stringent in its protocol, has accepted MDL for long-term use in the mouth.

My experience having placed more than 5000 units, is that mini-implants not only work, patients love them and these are an excellent practice builder. I can safely say that I enjoy at least a 95 percent success rate. I see my patients regularly for all dental procedures on a 6 monthly recall and mini-implants placed in more than seven years ago (that is when I embarked on mini-implants) are still functioning well. It is truly an advancement that the dental profession cannot ignore.

Can mini-implants also be placed in the socket immediately after the tooth extraction like we do with the regular implants?

In my practice and in my lectures, I teach the use of mini-implants in immediately extracted socket. What I do, is measure the length of the extracted root, choose a mini-implant at least 2-3 mm longer than the length of the root, and utilize the same procedure of the initial use of a pilot drill, I introduce the mini-implants into the socket. It is firm and I always pack a bone augmentation material into the socket and stitch tight the opening. If the opening is large, e.g., molar extraction, I place a membrane over the socket, so as to prevent washing out of the bone augmentation material.

I allow initial healing for about 4-5 weeks and then proceed to do the prosthetic aspect. I’ve met with very good results. I use Perioglas from the USA for best results.

An observant selection, appropriate treatment plan, precise surgery, and proper design of prosthesis are essential for optimal outcome. How will you grade the success rate of mini-implants in comparison with conventional implants?

Frankly speaking, there is really no comparison. Mini-implants were actually developed because of the drawbacks and failures of conventional dental implants. They are affordable and are really revolutionizing the use of dental implants. As I predicted, seven years ago in an article, it will bring about a paradigm shift in the use of dental implants. Mini-implants are so successful that these are experiencing exponential growth wherever these are introduced.

What are the advantages and disadvantages of mini-implants over conventional implants, and are there limits for their use?

Really, the advantages of mini-implants are phenomenal. You can even use in medically compromised patients with controlled diabetes, heart condition, and for those who are suffering from Alzheimer where there is very poor control of jaw movement, stabilized dentures

Dr Oliver Hennedige is the Secretary General of Asia Pacific Dental Federation (APDF) and is Executive Director, International College of Continuing Dental Education (ICDCE). He runs a very successful group dental practice in Singapore, and lectures and demonstrates extensively on mini dental implants. DT India editor, Isha Goel, had a chance to speak with Dr Oliver during a workshop, organized by APDF, ICDCE, and Indian Dental Association (IDA) recently in New Delhi, India.

Isha Goel: The dental implants have been the most influential change in dentistry and you recently shared your views about evolution of mini-implants in a workshop organized by Asia Pacific Dental Federation, ICDCE, and IDA recently in New Delhi, India. Can you give our readers an overview of the rationale for use of mini-implants?

Dr Oliver: Mini dental implants evolved because of the drawbacks and failures of the larger diameter conventional implants. Conventional implants, while being promoted as the panacea for missing teeth, have a high failure rate as these would require an invasive procedure, a very skillful operator, a lot of understanding, and the use of a complex range of specialized and specific instruments. The complexity has resulted in strict protocols that hoped to minimize failures.

While conventional dental implants are successful in the hands of an experienced and competent operator, it generally failed in the hands of those with less experience. It took time, and usually a lot of failures on the way before a dentist or specialist became adept in placing conventional implants.

Very old and frail patients with badly resorbed jaws need not undergo invasive procedures of bone build-up. They can be really benefited with the use of mini-implants. I’ve placed mini-implants in such patients in their late seventies and eighties. Some of my patients are still eating well and living quality lives right into their nineties.

I believe mini-implants will continue to evolve and a whole range of uses will come into existence, as they are minimally invasive, easy to use, operator friendly, patient friendly, and will be really a boon to patient care. Mini-implants are affordable and cost a fraction of conventional implants.

Dr Oliver, Dr Anil Kholi, Dr Jeffrey Tsang, and Dr Paramjit Singh (from left to right) during the workshop in New Delhi, India.